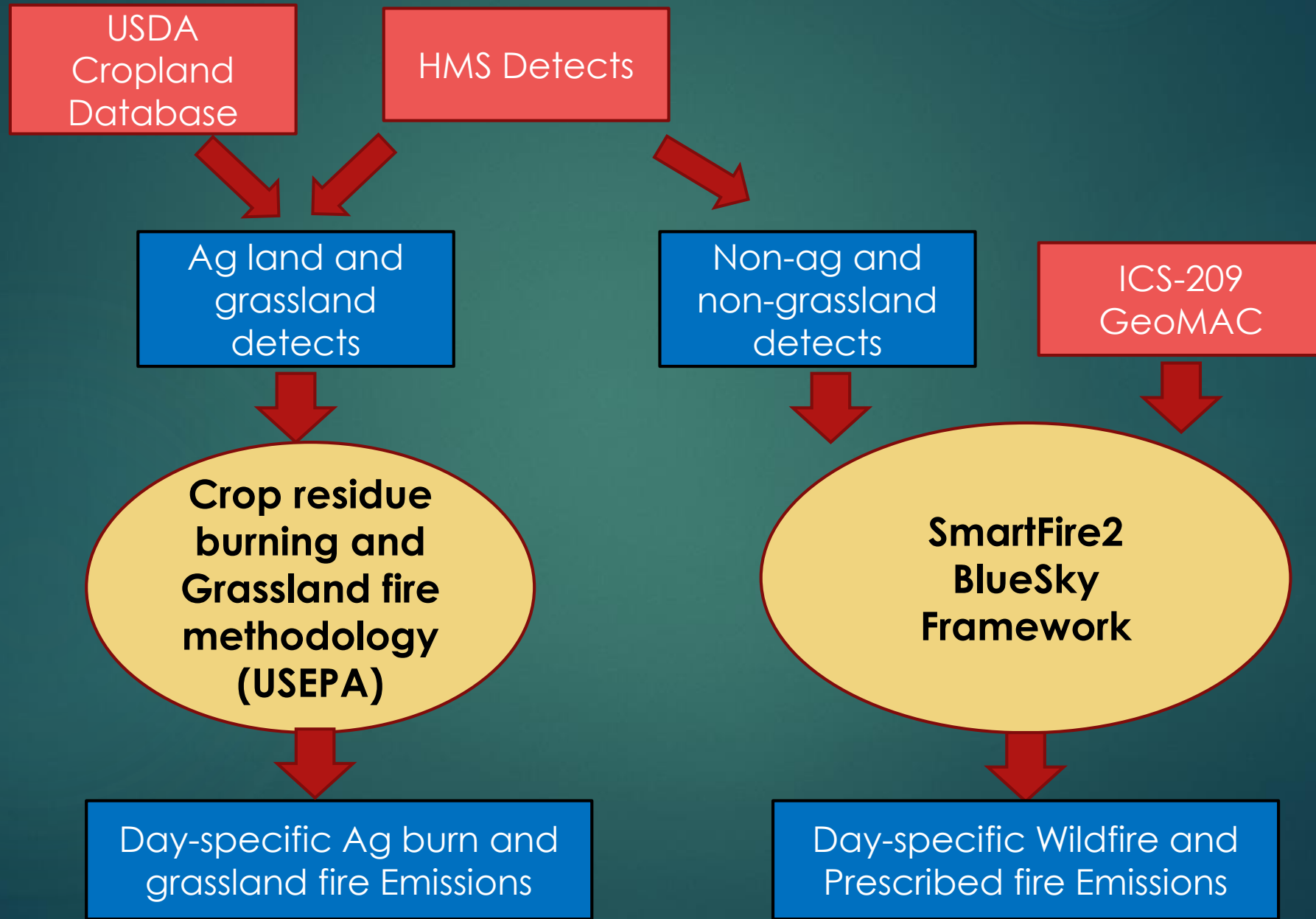


# Process of classification of Agricultural burns, grassland fires, and prescribed fires: non-NEI year

REVIEW FOR YEAR 2016 EMISSIONS MODELING PLATFORM PURPOSES

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# Fire Emissions Processing at High-Level for non-NEI year



# Crop residue burning and Grassland Fire Inventory

- ▶ NOAA Hazard Mapping System (HMS) detects
  - ▶ GOES, AVHRR, MODIS, VIIRS
- ▶ USDA Cropland Data Layer (CDL)
  - ▶ [https://www.nass.usda.gov/Research\\_and\\_Science/Cropland/SARS1a.php](https://www.nass.usda.gov/Research_and_Science/Cropland/SARS1a.php)
- ▶ Crop residue burning and Grassland/Pasture Fire Inventory
  - ▶ [https://www.epa.gov/sites/production/files/2015-08/documents/crop\\_residue\\_burning\\_in\\_2014.pdf](https://www.epa.gov/sites/production/files/2015-08/documents/crop_residue_burning_in_2014.pdf)
- ▶ EPA: Emissions factors
- ▶ **Grassland fires given separate treatment**
  - ▶ **SmartFire/BlueSky not ideal for identifying grassland fires (fuels database)**
- ▶ See “*Development of the crop residue and rangeland burning in the 2014 National Emissions Inventory using information from multiple sources*” by George Pouliot et al in Journal of the Air & Waste Management Association Vol 67 Issue 5, pp 613-622

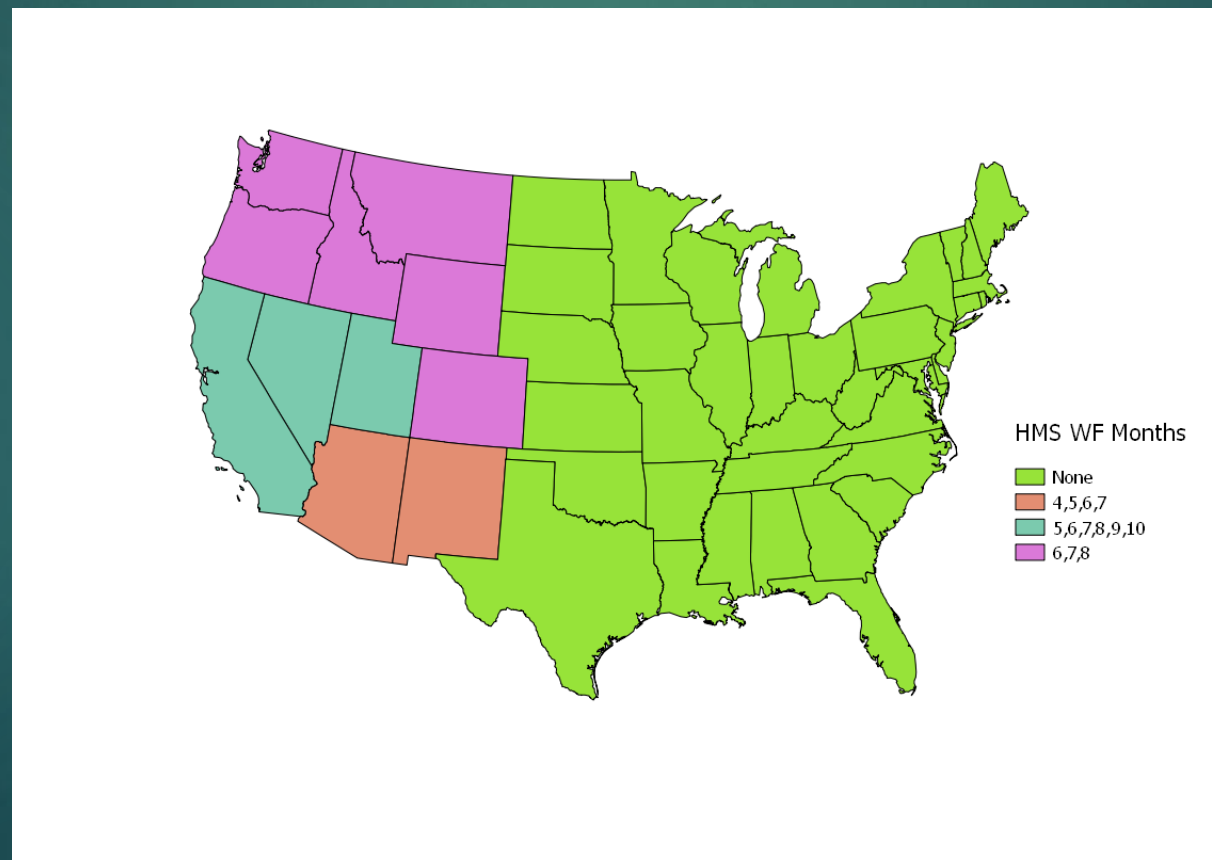
# Crop residue burning and Grassland Fire Inventory: SCCs supported

SCC	SCCDESC1	SCCDESC2
2801500000	Agricultural Field Burning - whole field set on fire	Unspecified crop type and Burn Method
2801500141	Agricultural Field Burning - whole field set on fire	Field Crop is Bean (red): Headfire Burning
2801500150	Agricultural Field Burning - whole field set on fire	Field Crop is Corn: Burning Techniques Not Important
2801500151	Agricultural Field Burning - whole field set on fire	Double Crop Winter Wheat and Corn
2801500152	Agricultural Field Burning - whole field set on fire	DoubleCrop Corn and Soybeans
2801500160	Agricultural Field Burning - whole field set on fire	Field Crop is Cotton: Burning Techniques Not Important
<b>2801500170</b>	<b>Agricultural Field Burning - whole field set on fire</b>	<b>Field Crop is Grasses: Burning Techniques Not Important</b>
2801500171	Agricultural Field Burning - whole field set on fire	Fallow
2801500220	Agricultural Field Burning - whole field set on fire	Field Crop is Rice: Burning Techniques Not Significant
2801500250	Agricultural Field Burning - whole field set on fire	Field Crop is Sugar Cane: Burning Techniques Not Significant
2801500262	Agricultural Field Burning - whole field set on fire	Field Crop is Wheat: Backfire Burning
2801500263	Agricultural Field Burning - whole field set on fire	DoubleCrop Winter Wheat and Cotton
2801500264	Agricultural Field Burning - whole field set on fire	DoubleCrop Winter Wheat and Soybeans

# Classifying Prescribed Burns vs. Wildfires

► For the 2016 alpha run SF2 classifies Prescribed (RX) fires three ways:

#1 : Fires only identified with HMS satellite detect data are assigned type by location and time period. Loosely, detects during the summer burn season in the Western US are identified as wildfires (WF) and all others are RX. (see map below)



# Classifying Prescribed Burns vs. Wildfires (2)

#2 - If a GeoMAC perimeter of the fire is available and reconciled to the HMS detect spatially and temporally, then the fire will be identified as a WF regardless of the HMS identification on (#1).

▶ [https://rmgsc.cr.usgs.gov/outgoing/GeoMAC/historic\\_fire\\_data/2016\\_perimeters\\_dd83.zip](https://rmgsc.cr.usgs.gov/outgoing/GeoMAC/historic_fire_data/2016_perimeters_dd83.zip)

#3 - If an ICS-209 report of the fire is available and reconciled to the HMS detect spatially and temporally, then the fire will be identified as the fire type specified in the ICS-209 report.

▶ An ICS-209 report takes precedent over HMS or GeoMAC fire type

▶ [https://fam.nwccg.gov/fam-web/sit/sit\\_2016.exe](https://fam.nwccg.gov/fam-web/sit/sit_2016.exe)